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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,157	04/16/2004	Daniel W. King	KING3001/JEK/JJC	7842
23364	7590	05/26/2005		
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314				
			EXAMINER PETERSON, KENNETH E	
			ART UNIT 3724	PAPER NUMBER

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/825,157

Applicant(s)

KING ET AL.

Examiner

Kenneth E Peterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 3-5 and 9-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-8,12 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 16 apr 04.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

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1. Claims 3-5 and 9-11 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on 07 April 05.

2. Claims 1,2 and 6-8 are objected to for incongruous titling and lack of antecedent basis.

Claim 1 is titled "An interlocking joint arrangement" that is *for use* with a cutter, but the body of the claim positively recites the cutter (lines 16 and 23). To fix this, Applicant should do one of two things;

A) remove the positive recitations of the cutter (as in claim 13).

B) change the claim title and transitional phrase to include the cutter.

Claim 2 has yet a different title from claim 1, and this should be changed to match.

Claims 6-8 use the terms "projections" and "protrusions" for the same part. One of these terms should be selected and the other one changed.

Appropriate correction is required.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 6,8,12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Kress et al.'680, who shows;

A mounting ring (24) having axially depending protrusions (26) with tapered surfaces (figures 8,10). The protrusion has a convex corner.

A support ring (39) having radially inwardly projecting flanges (40) with matching tapered surfaces (figures 8,10).

The device is usable in a number of different orientations, so either of the sides could be considered "upper" or "lower".

5. Claims 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hull '679, who shows;

A mounting ring (5) having axially depending protrusion (8) with tapered surfaces (figure 5).

A support ring (6) having radially outwardly projecting flanges (10) with matching tapered surfaces (figure 5).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6-8,12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hull '679, who shows a ring assembly with all of the recited limitation except the

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protrusions project upwardly rather than downwardly. However, which ring has the protrusions and which ring has the flanges is irrelevant to the functioning of the device.

It would have been obvious to one of ordinary skill in the art to have made a reversal of parts and had the top ring have the axially depending protrusions and the bottom ring have the radially outwardly extending flanges, since the operation of the device would not thereby be modified. See in re Japikse, 86 USPQ 70.

8. Claims 1,2,6-8,12 and 13 are rejected under 35 U.S.C. 103(a).

Examiner takes Official Notice that there are numerous cutting machines that employ impellers and a ring locking system. An example of this type of machine is the patent to Jacko et al. '824.

Examiner takes Official Notice that it is well known for tool's such as these to employ a ring locking system having one ring with axial protrusions having tapered surfaces and the other ring having radially outwardly projecting flanges with matching tapered surfaces. An example of this is the patent to Hull '679, as mentioned above. It would have been obvious to one of ordinary skill in the art to have modified a known cutting machine having a ring locking system, such as Jacko, by providing the rings with mating tapered axial protrusions and tapered radial flanges, as is well known and taught by Hull, in order to be able to easily connect and disconnect the rings for repair, replacement or maintenance.

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9. Made of record but not relied on are several patents showing pertinent ring locking systems.

Examiner would like to note that some of Applicant's claims are so broad that the search for them is nearly endless. Examiner has not yet searched everywhere that such references might be, so do not be surprised if minor claim amendments repeatedly yield new 102b references.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ken Peterson at 571-272-4512, on Monday-Thursday, 7AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan Shoap, can be reached at 571-272-4514. In lieu of mailing, it is encouraged that papers be faxed to 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. For more information about the PAIR system, see <http://pair-direct.uspto.gov> or call the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

kp  
April 28, 2005



KENNETH E. PETERSON  
PRIMARY EXAMINER